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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
09 615,999	07 14 2000	Wei Zhang	05770-097001 ASC-433	6737

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EXAMINER

TALBOT, BRIAN K

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 10 24 2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09 615,999

Applicant(s)

ZHANG ET AL

Examiner

Brian K Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 08 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,4-14,16-20,23-33,35-41 and 44-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,4-14,16-20,23-33,35-41 and 44-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/8/02 has been entered.
2. The amendment filed 10/8/02 has been considered and entered. Claims 2,3,21,22,42 and 43 have been canceled. Claims 1,4-14,16-20,23-33,35-41 and 44-58 remain in the application.

Claim Rejections - 35 USC § 112

3. The amendment filed 10/8/02 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the conditioned surface having the same crystallinity but different morphology than that of the deposited surface.

Applicant is required to cancel the new matter in the reply to this Office Action.

4. Claims 1,4-14,16-20,23-33,35-41 and 44-58 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a

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way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 103

Claims 1-14 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koster et al. or Tanaka et al. or Fritzenmeier et al. (6,022,832) in combination with either Nakamura et al. (5,534,491) or Saitoh et al. (5,234,901).

Koster et al. or Tanaka et al. Both teach the conventionality of pretreating a superconducting substrate with an etching solution to chemical etch the substrate prior to applying a subsequent coating. Koster et al. further teaches annealing an in oxygen environment can also lead to an improved subsequent coating deposition. Fritzenmeier et al. (6,022,832) teaches conditioning a superconducting surface with a conditioning gas, which can include oxygen.

Koster et al. or Tanaka et al. or Fritzenmeier et al. (6,022,832) all fail to teach "conditioning/pretreating" a superconductive layer as opposed to the substrate.

Nakamura et al. (5,534,491) or Saitoh et al. (5,234,901) both teach treating a superconductive layer by heating in oxygen or by laser irradiation prior to applying a subsequent coating which can be superconducting or non-superconducting.

Therefore, it is the Examiner's position that one skilled in the art at the time the invention was made would have had a reasonable expectation of success regardless of whether the

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"conditioning pretreating" was performed on a substrate or a coating film layer as evidenced by Nakamura et al. (5,534,491) or Saitoh et al. (5,234,901).

Claims 20,23-33,35-41 and 44-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi et al. (5,728,214) in combination with Nakamura et al. (5,534,491).

Konishi et al. (5,728,214) teaches surface treatment of a superconductive oxide in a heated atmosphere including oxygen at 50-200 mTorr subsequent to depositing another superconductive coating.

Features and reasons described above regarding Nakamura et al. (5,534,491) are incorporated here.

With respect to the claims which recite specific layers, i.e. buffer layers, biaxially textured layers, polycrystalline layers, etc. it is the Examiner's position that these layers are all conventional in the superconductor art and it would be reasonable for one skilled in the art to have had a reasonable expectation of achieving similar results regardless of the layer that is conditioned as these layers are similar in composition.

Response to Amendment

5. Applicant's arguments with respect to claims 1,4-14,16-20,23-33,35-41 and 44-58 have been considered but are not deemed persuasive.

Applicant argued that the prior art failed to teach "conditioning" a superconductive film or layer as opposed to a substrate.

Newly cited art clearly teaches that it is well known in the art to "condition/pretreat" a superconductive layer for subsequent deposition thereon.

Applicant argued that the crystallinity of the conditioned layer is the same while the morphology is different from that of the deposited film.

The Examiner disagrees. The prior art teaches "conditioning /roughening" superconductive surfaces for subsequent deposition of another coating. It is well known in the art to pre-treat, condition, roughen, etc. a surface for subsequent deposition thereon. The morphology is changed to achieve a "roughened/textured" surface which has increased surface area which leads to improved adhesion of the subsequent coating.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (703) 305-3775. The examiner can normally be reached on Tuesday-Friday 6AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-6078 for regular communications and (703) 872-9765 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3775.

B. K. Talbot

Brian K Talbot
Primary Examiner
Art Unit 1762

BKT
October 22, 2002